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Three new species of *Nuzonia* SPAETH, 1912 (Coleoptera: Chrysomelidae: Cassidinae)

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ABSTRACT. *Nuzonia amazonica* (Brazil), *N. atromaculata* (Brazil), and *N. marginepunctata* (Colombia), new to the science, are described. *Coptocycla obtusa* BOHEMAN, 1855 is transferred to the genus *Charidotis*.

Key words: entomology, taxonomy, new species, *Coleoptera*, *Chrysomelidae*, *Cassidinae*, *Nuzonia*, Neotropics.

The genus *Nuzonia* was proposed by SPAETH (1912) for *Charidotis gestatrix* BOHEMAN, 1855, *Coptocycla cayennensis* BOHEMAN, 1855, *Coptocycla isthmica* CHAMPION, 1894 and his new species *Nuzonia ibaguensis* SPAETH, 1912. HINCKS (1952) designated *N. ibaguensis* as type species for the genus. WEISE (1921) described a new genus *Litocassis* for his new species *L. placidula* WEISE, 1921 but the name became junior synonym of *Charidotis gestatrix* BOHEMAN, 1855. As a result, SPAETH (1931) synonymized *Litocassis* with *Nuzonia*. In further papers three other species of *Nuzonia* were described and three had been transferred to *Nuzonia* from the genus *Coptocycla* (SPAETH 1919, 1936, 1937, BOROWIEC 1998). *Coptocycla obtusa* (BOHEMAN, 1855) placed in my catalogue (BOROWIEC 1999) in the genus *Nuzonia*, belongs actually to the genus *Charidotis*, **new combination**. I have examined holotype of *C. obtusa* preserved at Zoologisches Museum, Humboldt Universität, Berlin and the species at first glance is extremely similar to the members of the genus *Nuzonia* but has micropectinate claws (micropecten in *Ch. obtusa* is shorter than in most species of the genus *Charidotis*, almost visible), and antennae with six dull, pubescent distal segments (in *Nuzonia* claws

are never micropectinate and antennae have seven or eight dull, pubescent distal segments). Thus, the genus *Nuzonia* comprises 10 described species. In material studied recently I found next three species new to the science. Their descriptions are given below.

Genus *Nuzonia* SPAETH, 1912

Nuzonia SPAETH, 1912 c: 5 (type species: *Nuzonia ibaguensis* SPAETH, 1912, designated by HINCKS, 1952: 342), 1914 g: 134; HINCKS, 1952: 342; SEENO and WILCOX, 1982: 178; RILEY, 1986: 112.

Litocassis WEISE, 1921: 197 (type species: *Charidotis gestatrix* BOHEMAN, 1855 = *Litocassis placidula* WEISE, 1921, by monotypy).

SPAETH (1912) characterized the genus *Nuzonia* as having semicircular pronotum without anterior angles, simple claws, three or four basal glabrous antennal segments, and antennal segment 3 shorter than segment 2. However some further species, described or transferred to the genus *Nuzonia*, have antennal segment 3 longer than segment 2, but it is never as elongate as in related genera of the *Coptocyclus* complex. Prosternal process in members of the genus *Nuzonia* is quite broad in the middle, with apex only slightly to moderately expanded apically, while in members of the genus *Coptocyclus* prosternal process is narrow in the middle with apex strongly expanded apically. All species have small eyes and distinct gena. Body is always regularly convex, without tubercles or gibbosities.

Nuzonia amazonica n. sp.

ETYMOLOGY

Named after its terra typica, Amazonas Province in Brazil.

DIAGNOSIS

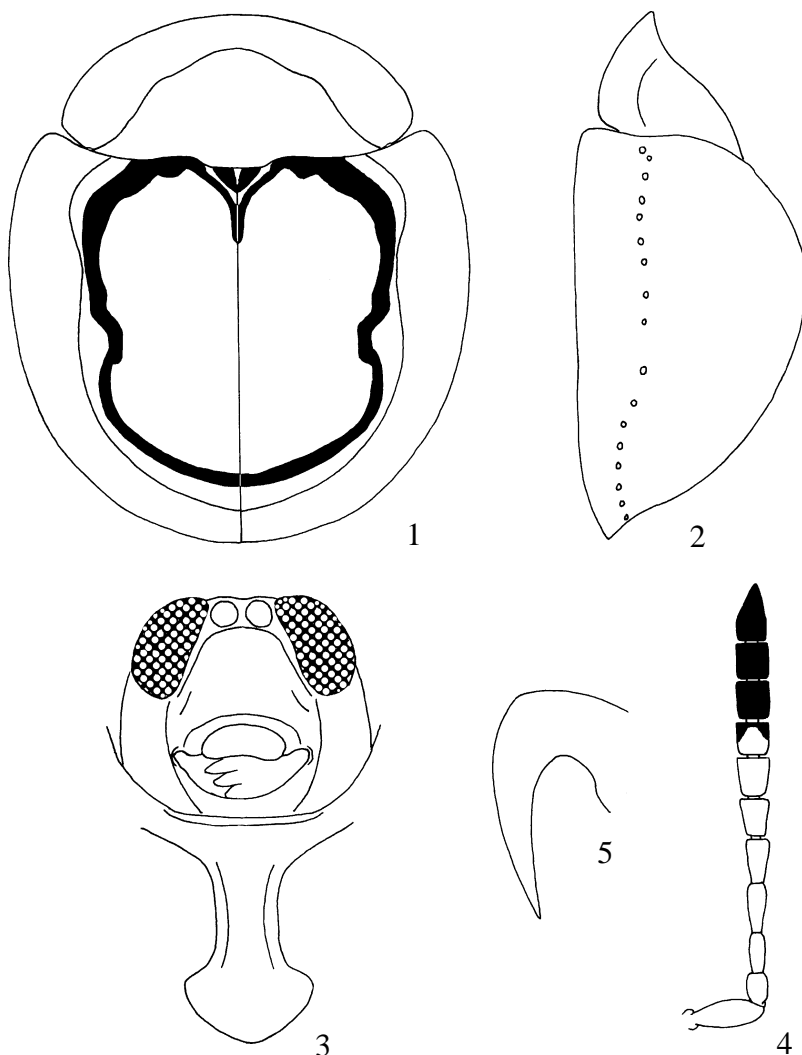
It belongs to the species group with elongate third antennal segment and dark elytral pattern. The pattern forming black, narrow ring around elytral disc is unique. *N. laquifera* (KIRSCH) has also black pattern, but it forms a loop-shaped figure. *N. camerata* (SP.) differs in olivaceous-green pattern of broad band along sides and in finer elytral puncturation. *N. uniformis* (BOH.) differs in uniformly yellow elytra, finer elytral puncturation, and less declivous explanate margin of elytra.

DESCRIPTION

Length: 8.5 mm, width: 7.2 mm, pronotal length: 2.9 mm, pronotal width: 5.5 mm, length/width ratio: 1.18, pronotal width/length ratio: 1.9. Body almost circular (fig. 1).

Pronotum uniformly yellow. Scutellum black with yellowish-red stripe. Elytral disc yellow with narrow black ring as in fig. 1. In anterior half of disc ring

occupies penultimate interval, in posterior half of disc occupies interval 8, marginal interval and apex of disc yellow. Punctures in area inside ring with reddish areolae, smaller at top of disc and larger in parts close to border of ring. Along border of ring areolae partly coalescent and groundcolour of disc surface mostly reddish. Explanate margin of elytra, head and ventrites uniformly yellow. Antennae mostly yellow, three apical segments and apical part of segment 8 black.



1-5. *Nuzonia amazonica*: 1 - dorsal view, 2 - lateral view, 3 - head and prothorax, 4 - antenna, 5 - tarsal claw

Pronotum almost semicircular, basal angles rounded. Pronotal disc regularly convex, its surface smooth and glabrous. Explanate margin of pronotum subhorizontal, smooth and glabrous. Scutellum triangular. Base of elytra slightly wider than base of pronotum, humeri only slightly protruding anterad, rounded. Elytral disc strongly, regularly convex (fig. 2), without impressions, only in principal point with group of large punctures. Elytral puncturation regular, punctures at top of disc small and sparse, with distance between punctures three to five times longer than puncture diameter, on sides larger and denser, with distance between punctures c. as long as puncture diameter. Marginal row distinct, its punctures three to four times larger than in submarginal row. Intervals flat, at top of disc four to five times wider than rows, on sides of disc as wide as or slightly wider than rows, marginal interval very broad, c. twice wider than submarginal rows. Surface of intervals smooth and glabrous. Explanate margin moderately declivous, its surface smooth and glabrous. Apex of elytral epipleura bare.

Head broad, eyes occupy only half length of its sides (fig. 3). Clypeus trapezial, only slightly convex, c. 1.3 times wider than long, clypeal lines fine but visible on their whole length. Labrum only shallowly emarginate. Prosternal process moderately expanded apically, its surface smooth and glabrous. Antennae stout, length ratio of antennal segments: 100:47:60:73:67:53:53:47:53:50:83. Segment 3 c. 1.3 times longer than 2, segments 9 and 10 only slightly longer than wide (fig. 4). Four basal segments smooth and glabrous, seven distal pubescent and dull, but segment 5 less pubescent than remaining apical segments. Claws large, simple (fig. 5).

Genitalia not dissected.

TYPE

Holotype: [Brazil]: "Borba, AM, Rio Mapia, 22 IV 1996, A. BONALDO" "Col. MCN 160.259" (preserved at Museu de Ciencias Naturais, Fundação Zoobotânica do Rio Grande do Sul, Porto Alegre, Brazil).

Nuzonia atromaculata n. sp.

ETYMOLOGY

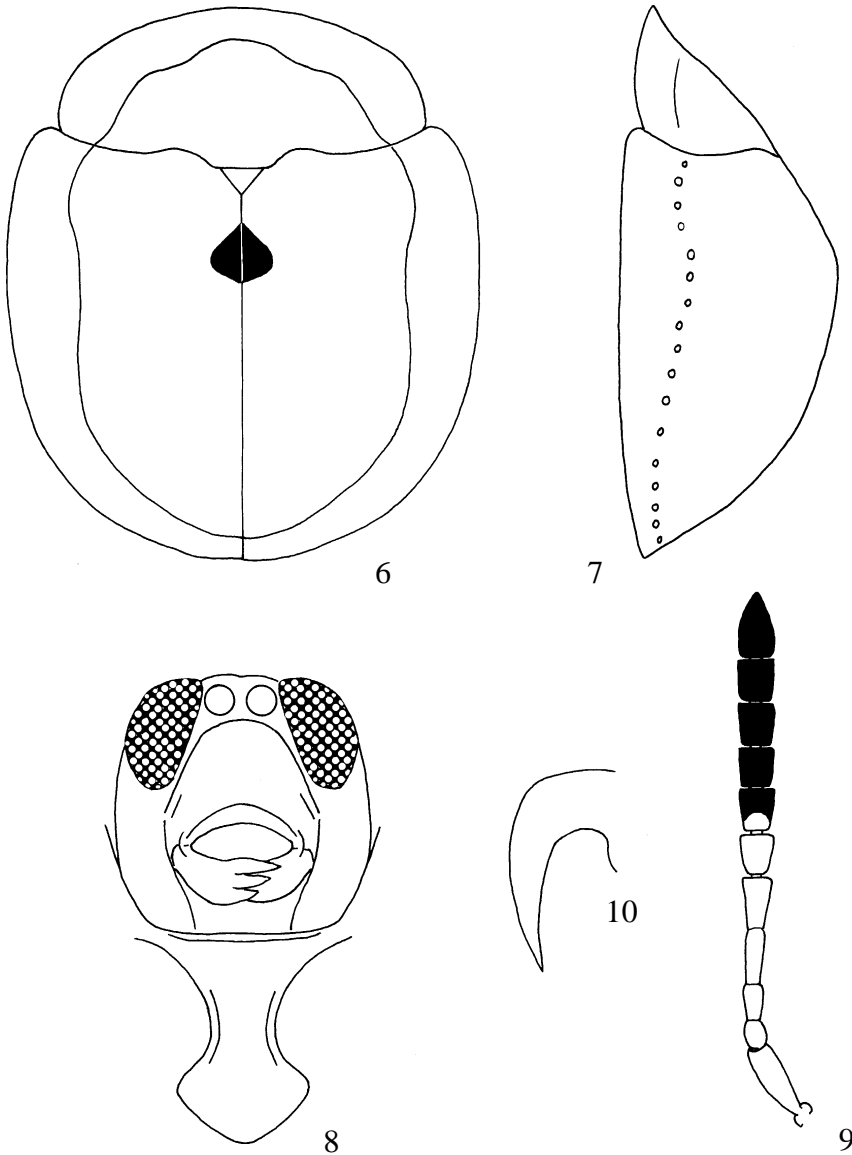
Named after black sutural spot.

DIAGNOSIS

It belongs to the species group with short third antennal segment, only slightly longer than the second segment. Its elytral pattern, with black rhomboidal spot in postscutellar point and red marked elytral punctures, is unique. *Nuzonia laquifera* (KIRSCH) and *N. amazonica* n. sp. have also black pattern, but it forms narrow black ring or loop-shaped figure. *N. isthmica* (Sp.) has also sutural spot, but in posterior half of suture, and it is reddish, or bicoloured, reddish and black.

DESCRIPTION

Length: 9.4 mm, width: 7.7 mm, pronotal length: 3.1 mm, pronotal width: 6.0 mm, length/width ratio: 1.22, pronotal width/length ratio: 1.94. Body almost circular (fig. 6).



6-10. *Nuzonia atromaculata*: 6 - dorsal view, 7 - lateral view, 8 - head and prothorax, 9 - antenna, 10 - tarsal claw

Pronotum uniformly yellow. Scutellum yellow. Elytral disc yellow with romboidal, black spot in postscutellar area (fig. 6). Each elytral puncture marked with red. Explanate margin of elytra, head and ventrites uniformly yellow. Antennae mostly yellow, four apical segments and apical 2/3 of segment 8 black.

Pronotum almost semicircular, basal angles rounded. Pronotal disc regularly convex, its surface smooth and glabrous. Explanate margin of pronotum subhorizontal, smooth and glabrous. Scutellum triangular. Base of elytra slightly wider than base of pronotum, humeri only slightly protruding anterad, rounded. Elytral disc strongly, regularly convex (fig. 7), with very shallow postscutellar and principal impressions. Elytral puncturation regular, only third interval with several additional, irregular punctures. Puncturation fine, on sides of disc only slightly coarser but sparser than in sutural rows, distance between punctures in sutural rows twice to thrice, on sides three to five times longer than puncture diameter. Marginal row distinct, its punctures three to four times larger than in submarginal row. Intervals flat, three to four times wider than rows, their surface smooth and glabrous. Explanate margin moderately declivous, its surface smooth and glabrous. Apex of elytral epipleura with several short, erect hair.

Head broad, eyes occupy only 2/5 length of its sides (fig. 8). Clypeus trapezial, only slightly convex, c. 1.5 times wider than long, clypeal lines fine but visible on whole their length. Labrum shallowly emarginate. Prosternal process moderately expanded apically, its surface smooth and glabrous. Antennae stout, length ratio of antennal segments: 100:37:43:80:73:53:60:53:57:57:90. Segment 3 c. 1.16 times longer than 2, segments 9 and 10 only slightly longer than wide (fig. 9). Three basal segments smooth and glabrous, eight distal pubescent and dull, segment 4 almost as dense pubescent as remaining apical segments. Claws large, simple (fig. 10).

Genitalia not dissected.

TYPE

Holotype: "Brazil, Amazonas, Manaus, II 1987" (preserved at Department of Systematic Zoology and Zoogeography, Wrocław University, Wrocław, Poland).

Nuzonia marginepunctata n. sp.

ETYMOLOGY

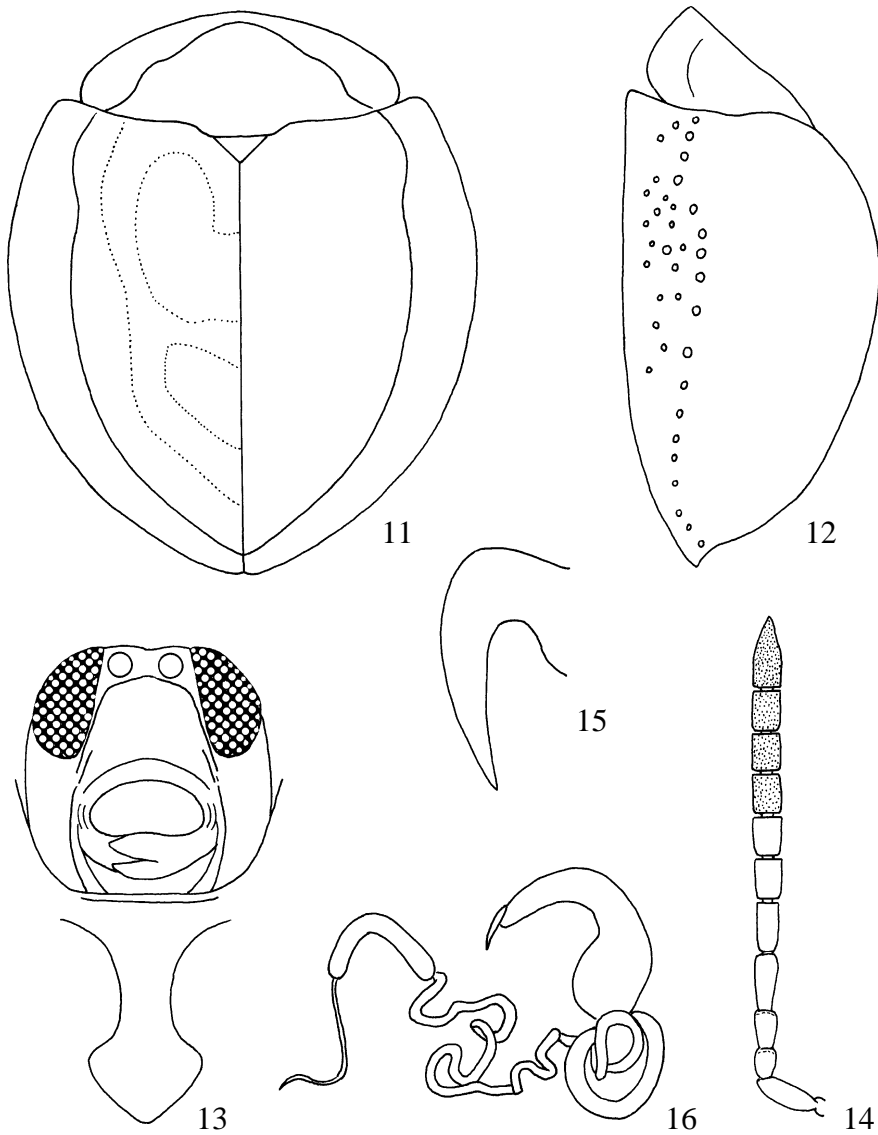
Named after punctate explanate margin of elytra.

DIAGNOSIS

It is unique species, the only within the genus *Nuzonia* with punctate explanate margin of elytra. Other uniformly yellow species - *N. brevicornis* BOR., *N. cayennensis* (BOH.), *N. isthmica* (CHAMP.) and *N. uniformis* (BOH.) differ also in more rounded body, without acuminate apex.

DESCRIPTION

Length: 8.0-8.2 mm, width: 6.5-6.8 mm, pronotal length: 2.4-2.5 mm, pronotal width: 4.5-4.7 mm, length/width ratio: 1.18-1.23, pronotal width/length ratio: 1.88. Body slightly oval with acuminate apex (fig. 11).



11-16. *Nuzonia marginepunctata*: 11 - dorsal view, 12 - lateral view, 13 - head and prosternum, 14 - antenna, 15 - tarsal claw, 16 - spermatheca

Pronotum uniformly yellow. Scutellum yellow. Elytral disc yellow with only elongate, pink stripe behind the middle of sutural interval, or with pink figure as in fig. 11. Explanate margin of elytra, head and ventrites uniformly yellow. Antennae mostly yellow, four apical segments infusate.

Pronotum almost semicircular, basal angles rounded. Pronotal disc regularly convex, its surface smooth and glabrous. Explanate margin of pronotum subhorizontal, smooth and glabrous. Scutellum triangular. Base of elytra moderately wider than base of pronotum, humeri only slightly protruding anterad, rounded. Elytral disc strongly, regularly convex (fig. 12), with very shallow postscutellar and principal impressions, principal are with group of coarse punctures. Elytral puncturation regular, only third interval with few additional, irregular punctures. Puncturation moderately coarse, on principal area and sides above principal area slightly coarser than in sutural rows, but on slope only slightly finer than in anterior half of disc. Distance between punctures two to four times longer than puncture diameter, but punctures in rows have tendency to group 2-4 together. Marginal row distinct, its punctures three to four times larger than in submarginal row. Intervals flat, three to four to five times wider than rows, marginal interval broad, c. twice wider than submarginal rows. Surface of intervals smooth and glabrous. Explanate margin moderately declivous, its surface in anterior half with several coarse punctures, between punctures smooth and glabrous. Apex of elytral epipleura with few short, erect hair.

Head broad, eyes occupy only half length of its sides (fig. 13). Clypeus trapezial, only slightly convex, c. 1.4 times wider than long, clypeal lines fine but visible on their whole length. Labrum only shallowly emarginate. Prosternal process moderately expanded apically, its surface smooth and glabrous. Antennae stout, length ratio of antennal segments: 100:46:57:92:77:62:62:58:54:57:107. Segment 3 c. 1.24 times longer than 2, segments 9 and 10 only slightly longer than wide (fig. 14). Three basal segments smooth and glabrous, eight distal pubescent and dull, but segment four less pubescent than remaining apical segments. Claws large, simple (fig. 15).

Spermatheca as in fig. 16.

TYPES

Holotype: "S. America, Cauca Valley"; paratype: "Colombia, Manizales"; paratype: "Colombia Stauding." "Coptocycla obsoleta m. [J. WEISE handwriting]" (holotype and first paratype preserved at Department of Systematic Zoology and Zoogeography, Wrocław University, Wrocław, Poland; second paratype at Zoologisches Museum, Humboldt Universität, Berlin, Germany).

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